

FRONT	BACK	BACK
Property	Description	Algebraic Example
Commutative Property of Addition	changing the order of the addends does not change the sum	$a + b + c = c + a + b$
Commutative Property of Multiplication	changing the order of the factors does not change the product	$a \cdot b \cdot c = c \cdot a \cdot b$
Associative Property of Addition	regrouping the addends does not change the sum	$a + (b + c) = (c + a) + b$
Associative Property of Multiplication	regrouping the factors does not change the product	$a \cdot (b \cdot c) = c \cdot (a \cdot b)$
Identity Property of Addition	the sum of any real number and zero is equal to the given number	$a + 0 = a$
Identity Property of Multiplication	the product of a number and 1 always equals one	$b \cdot 1 = b$

Inverse Property of Addition	the sum of a number and its additive inverse always equals zero	$c + (-c) = 0$
Additive inverse: the opposite of a number		
Inverse Property of Multiplication	the product of a number and its multiplicative inverse is always equal to one	$a \cdot (1/a) = 1$
Multiplicative Inverse: the reciprocal of a number, the product of a nonzero number and its multiplicative inverse is 1		
Symmetric Property	expressions of equality	$a = b$ so $b = a$
Multiplication Property of Zero	the product of any real number and zero is zero	$n \cdot 0 = 0$
Multiplication Property of -1	any real number multiplied by a negative one will always equal its opposite	$-1 \cdot n = -n$